Toxicology and Applied Pharmacology

Official Journal of the Society of Toxicology

Founding Editors
Frederick Coulston
Harry W. Hays
Arnold J. Lehman

Editorial Board
Yves Alarie
Bernard A. Becker
David A. Blake
Joseph F. Borzelleca
Jules Brodeur
William W. Carlton
Herbert H. Cornish
John W. Daniel
Thomas D. Darby
Felix A. de la Iglesia
Robert L. Dixon
John Doull
Donald J. Ecobichon
John L. Emmerson
Robert B. Forney
George C. Fuller
James M. Fujimoto
Perry J. Gehring
James E. Gibson
Leon Golberg
Robert E. Gosselin
Jack E. Gray
Harold C. Grice
Paul B. Hammond
Bo R. Holmstedt
Marjorie G. Horning
Renate D. Kimbrough
Robert R. Lauwerys
Harold N. MacFarland
Paul Mazel
John H. Mennear
Ian C. Munro
Robert A. Neal
Paul M. Newberne
Stata Norton
Emil Poulsen
Mary L. Quaife
Jack L. Radomski
Jane F. Robens
Sorell L. Schwartz
Richard D. Stewart
F. William Sunderman, Jr.
John A. Thomas
Gary A. Van Gelder
Carrol S. Weil
Hanspeter Witschi

Editor:
GABRIEL L. PLAA

Associate Editors:
SEYMOUR L. FRIESS
TOM S. MIYA
JAMES W. NEWBERNE
ROGER P. SMITH

Volume 40, 1977

Academic Press
New York and London

Copyright © 1977 by Academic Press, Inc.

ALL RIGHTS RESERVED

No part of this publication may be reproduced or transmitted in any form, or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owner.

CONTENTS OF VOLUME 40

NUMBER 1, APRIL 1977

A. Michael Kaplan and Henry Sherman. Toxicity Studies with Methyl *N*-[[(Methylamino)carbonyl]oxy] ethanimidothioate 1

John R. Hodgson and Cheng-Chun Lee. Cytotoxicity Studies on Dithiocarbamate Fungicides 19

J. L. Stickney. Cardiac Effects of 1-α-Acetylmethadol. I. Chronotropic Effects *in Vitro* 23

F. Lee Rodkey and Harold A. Collison. Biological Oxidation of [^{14}C] Methylene Chloride to Carbon Monoxide and Carbon Dioxide by the Rat 33

F. Lee Rodkey and Harold A. Collison. Effect of Dihalogenated Methanes on the *in Vivo* Production of Carbon Monoxide and Methane by Rats 39

Edwin M. Uyeki, Ahmed El Ashkar, Don W. Shoeman, and Teresa U. Bisel. Acute Toxicity of Benzene Inhalation to Hemopoietic Precursor Cells 49

N. F. Johnson, N. McKecknie, and J. V. Forrester. An Investigation of Retinal Function and Structure in Rabbits Treated Long-Term with Tranexamic Acid 59

John R. Hodgson, John P. Glennon, Jack C. Dacre, and Cheng-Chun Lee. Metabolism and Disposition of Isomers of Dinitro- and Mononitroglycerol in the Rat . 65

Raymond F. Burk, Hilliard E. Jordan, Jr., and Kenneth W. Kiker. Some Effects of Selenium Status on Inorganic Mercury Metabolism in the Rat 71

E. L. McGown and J. W. Suttie. Mechanism of Fluoride-Induced Hyperglycemia in the Rat 83

O. T. Sanders, R. L. Kirkpatrick, and P. E. Scanlon. Polychlorinated Biphenyls and Nutritional Restriction: Their Effects and Interactions on Endocrine and Reproductive Characteristics of Male White Mice 91

J. Vacher, F. Delevallee, and R. Deraedt. Mechanism of the Hypersusceptibility to the Lethal Effect of Endotoxin (ET) Induced in Mice by Injection of Beryllium Phosphate 99

J. J. Gordon and L. Leadbeater. The Prophylactic Use of 1-Methyl; 2-Hydroxyiminomethylpyridinium Methanesulfonate (P2S) in the Treatment of Organophosphate Poisoning 109

Sydney A. Shain, J. Christopher Shaeffer, and Robert W. Boesel. The Effect of Chronic Ingestion of Selected Pesticides upon Rat Ventral Prostate Homeostasis 115

Barry Gold and Sidney S. Mirvish. *N*-Nitroso Derivatives of Hydrochlorothiazide, Niridazole, and Tolbutamide 131

Seymour Levine, Richard Sowinski, and William L. Albrecht. T-Lymphocyte Depletion Induced in Rats by Analogs of Tilorone Hydrochloride 137

Seymour Levine and Richard Sowinski. T-Lymphocyte Depletion and Lesions of Choroid Plexus and Kidney Induced by Tertiary Amines in Rats 147

A. J. Stevenson, S. Kacew, and R. L. Singhal. Influence of Lead on Hepatic, Renal and Pulmonary Nucleic Acid, Polyamine, and Cyclic Adenosine 3′:5′-Monophosphate Metabolism in Neonatal Rats 161

SHORT COMMUNICATION

OVE SVENDSEN. The Effect of Phenobarbital on Chlorphentermine-Induced Alveolar Foam Cells in Rats 171

ERRATUM 175

NUMBER 2, MAY 1977

C. J. STONE AND R. B. FORNEY. The Effects of Phencyclidine on Ethanol and Sodium Hexobarbital in Mice 177

EMIL R. SMITH, MIASNIG HAGOPIAN, AND HOWARD C. REISTER. The Uptake and Secretion of 2-Acetylaminofluorene by the Rat and Dog Prostate 185

STUART Z. CAGEN AND JAMES E. GIBSON. Liver Damage following Paraquat in Selenium-Deficient and Diethyl Maleate-Pretreated Mice 193

SUSAN D. POTTER AND GENNARD MATRONE. A Tissue Culture Model for Mercury–Selenium Interactions 201

FIDELIS I. IKEGWUONU AND OLUMBE BASSIR. Effects of Phytohemagglutinins from Immature Legume Seeds on the Function and Enzyme Activities of the Liver, and on the Histopathological Changes of Some Organs of the Rat 217

E. J. GRALLA, R. W. FLEISCHMAN, Y. K. LUTHRA, M. HAGOPIAN, J. R. BAKER, J. ESBER, AND W. MARCUS. Toxic Effects of Hexachlorobenzene after Daily Administration to Beagle Dogs for One Year 227

MAX GOLDMAN, RAYMOND D. DILLON, AND R. MARK WILSON. Thyroid Function in Pekin Ducklings as a Consequence of Erosion of Ingested Lead Shot 241

H. M. MEHENDALE. Effect of Preexposure to Kepone on the Biliary Excretion of Imipramine and Sulfobromophthalein 247

J. W. EMBREE, J. P. LYON, AND C. H. HINE. The Mutagenic Potential of Ethylene Oxide Using the Dominant–Lethal Assay in Rats 261

A. P. FERKO AND E. BOBYOCK. Induction of Physical Dependence in Rats by Ethanol Inhalation without the Use of Pyrazole 269

D. KELLO AND KRISTA KOSTIAL. Influence of Age and Milk Diet on Cadmium Absorption from the Gut 277

TETSUYA KAMATAKI, OSAMU SUGITA, NAOKI OZAWA, AND HARUO KITAGAWA. Stabilization and Induction of a Lipid Peroxidation Inhibitor Present in the Soluble Fraction of Rat Liver Homogenates 283

DAVID J. FRIEDENBACH AND KENNETH L. DAVISON. Scanning and Transmission Electron Microscopic Changes Associated with Duck and Chicken Shell Gland Cilia after *p,p'*-DDT Administration 291

CAROLE A. KIMMEL. Effect of Route of Administration on the Toxicity and Teratogenicity of EDTA in the Rat 299

B. A. SCHWETZ, K. D. NITSCHKE, AND R. E. STAPLES. Cleft Palates in CF-1 Mice after Deprivation of Water during Pregnancy 307

STUART Z. CAGEN, MAURLINE M. PREACHE, AND JAMES E. GIBSON. Enhanced Disappearance of Drugs from Plasma following Polybrominated Biphenyls 317

STUART Z. CAGEN AND JAMES E. GIBSON. Ouabain Lethality as a Measure of Biliary Function in Developing Mice and Rats and Effect of Polybrominated Biphenyls .. 327

EMIL R. SMITH, MIASNIG HAGOPIAN, AND RICHARD D. NORLIN. The Penetration of *N*-Hydroxyurethane into the Prostate and Prostatic Secretion of the Rat and Dog... 335

ANURADHA BANERJI, MRINAL K. PODDAR, AND JAGAT J. GHOSH. Action of Δ^9-Tetrahydrocannabinol on Membrane-Bound Monoamine Oxidase Activity..... 347

TOHRU OHYAMA. Effects of Phthalate Esters on Glucose 6-Phosphate Dehydrogenase and Other Enzymes *in Vitro*..... 355

F. M. SULLIVAN AND PATRICIA R. MCELHATTON. A Comparison of the Teratogenic Activity of the Antiepileptic Drugs Carbamazepine, Clonazepam, Ethosuximide, Phenobarbital, Phenytoin, and Primidone in Mice..... 365

NUMBER 3, JUNE 1977

BARRY S. LEVINE AND SHELDON D. MURPHY. Esterase Inhibition and Reactivation in Relation to Piperonyl Butoxide–Phosphorothionate Interactions..... 379

BARRY S. LEVINE AND SHELDON D. MURPHY. Effect of Piperonyl Butoxide on the Metabolism of Dimethyl and Diethyl Phosphorothionate Insecticides..... 393

BETTY J. WILLIAMS, WILLIAM H. GRIFFITH, III, CATHERINE M. ALBRECHT, JAMES H. PIRCH, AND MILTON R. HEJTMANCIK, JR. Effects of Chronic Lead Treatment on Some Cardiovascular Responses to Norepinephrine in the Rat..... 407

E. GRACIELA TORANZO, T. GILLESSE, M. MENDENHALL, G. J. TRAIGER, P. G. RILEY, R. P. HANZLIK, AND R. A. WILEY. Effect of Substituents on Arene Oxide-Mediated Liver Toxicity among Substituted Bromobenzenes..... 415

KIRK T. KITCHIN AND VICTOR DISTEFANO. Dopamine and Interscapular Fat Hemorrhage in the Rat Pup..... 427

ROBERT W. CALDWELL AND CLINTON B. NASH. Pulmonary and Cardiovascular Effects of Mefloquine Methanesulfonate..... 437

DONALD A. FOX, JAMES P. LEWKOWSKI, AND GARY P. COOPER. Acute and Chronic Effects Neonatal Lead Exposure on the Development of the Visual Evoked Response in Rats..... 449

MELVIN E. ANDERSEN, ROBERT A. JONES, RAYMOND G. MEHL, THOMAS A. HILL, LEON KURLANSIK, AND LAWRENCE J. JENKINS, JR. The Inhalation Toxicity of Sulfolane (Tetrahydrothiophene-1,1-Dioxide)..... 463

REGINE KAHL AND KARL J. NETTER. Ethoxyquin as an Inducer and Inhibitor of Phenobarbital-Type Cytochrome *P*-450 in Rat Liver Microsomes..... 473

K. H. YANG, WILLIAM A. CROFT, AND RICHARD E. PETERSON. Effects of 2,3,7,8-Tetrachlorodibenzo-*p*-dioxin on Plasma Disappearance and Biliary Excretion of Foreign Compounds in Rats..... 485

NANDKUMAR S. SHAH, ELIZABETH HIXSON, O. D. GULATI, D. KUHN, AND P. P. MATHUR. Maternal–Fetal Distribution of Methaqualone in Control and SKF 525-A-Pretreated Pregnant Mice..... 497

DANIEL A. SPYKER AND JOAN M. SPYKER. Response Model Analysis for Cross-Fostering Studies: Prenatal versus Postnatal Effects on Offspring Exposed to Methylmercury Dicyandiamide..... 511

TINE KUIPER-GOODMAN, D. L. GRANT, C. A. MOODIE, G. O. KORSRUD, AND I. C. MUNRO. Subacute Toxicity of Hexachlorobenzene in the Rat..... 529

YASUNOBU SUKETA AND EIICHI MIKAMI. Changes in Urinary Ion Excretion and Related Renal Enzyme Activities in Fluoride-Treated Rats..... 551

Shoji Fukushima, Tsutomu Hibino, Michiko Shibata, Gen'i Murasaki, Tadashi Ogiso, and Nobuyuki Ito. Effect of Hepatotoxic or Nephrotoxic Agents on the Induction of Colon Cancers in Rats by 1,2-Dimethylhydrazine 561

G. L. Kennedy, Jr., I. A. Dressler, J. L. Keplinger, and J. C. Calandra. Placental and Milk Transfer of Hexachlorophene in the Rat 571

Robert L. Bornshein, Donald A. Fox, and I. Arthur Michaelson. Estimation of Daily Exposure in Neonatal Rats Receiving Lead via Dam's Milk 577

Short Communication

P. M. Edwards and V. H. Parker. A Simple, Sensitive, and Objective Method for Early Assessment of Acrylamide Neuropathy in Rats 589

In Memoriam—Sidney B. Laskin 593

Author Index for Volume 40 595

Subject Index for Volume 40 597

Chemical Index for Volume 40 601